Wahiawa Naval Computer and Telecommunications Area Master Station Eastern Pacific
Wahiawa, Hawaii

Engineering Field Division/Activity: PACDIV

Major Claimant: COMNAVCOMTELCOM

Size: 2,422 Acres

Funding to Date: $2,565,000

Estimated Funding to Complete: $53,701,000

Base Mission: Operates and maintains communications facilities and equipment for Naval shore installations and fleet units in the Eastern Pacific

Contaminants: Metals, petroleum hydrocarbons

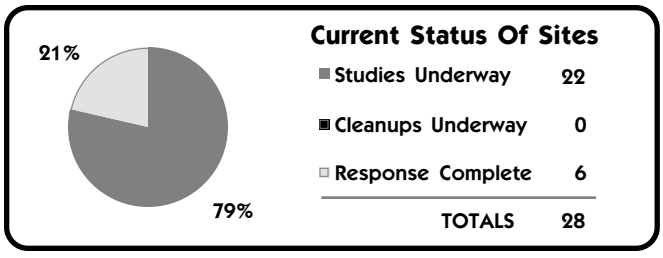
Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	24	High:	16	Not Evaluated:	2
RCRA Corrective Action:	0	Medium:	1	Response Complete:	6
RCRA UST:	4	Low:	3	Total Sites:	28
Total Sites:	28				

NPL

EXECUTIVE SUMMARY

Naval Computer and Telecommunications Area Master Station (NCTAMS), Eastern Pacific, EASTPAC is located on the island of Oahu, the third largest of the 132 islands that comprise the Hawaiian archipelago. As the area master station, NCTAMS EASTPAC is tasked with operating and maintaining communications facilities and equipment for naval shore installations and fleet units in the eastern Pacific area. In order to carry out this mission, NCTAMS EASTPAC operates the following facilities: NCTAMS Wahiawa; Naval Radio Transmitting Facility (NRTF) Lualualei, a small satellite communications system (Opana), a microwave relay station at Kokekole Pass; satellite Naval Telecommunications centers at various areas on Oahu, and a special position operator switchboard at Pearl Harbor. Industrial operations are primarily conducted at NCTAMS Wahiawa and NRTF Lualualei, and have been the focus of the Navy's Installation Restoration Program (IRP). At these two facilities, maintenance and operation of electrical transformers and switches has been the primary source of contamination. Transformers containing the chemical additive PCB have resulted in contamination of the soil surrounding electrical transformers. Due to PCB contamination in the soil of working and residential areas (Site 14), NCTAMS EASTPAC was added to the National Priorities List (NPL) on May 31, 1994. Other contamination resulting from operations and maintenance activities include metals, petroleum and Underground Storage Tanks (USTs). The Navy has changed its operational processes to prevent further contamination.

NCTAMS Wahiawa is located on approximately 700 acres of land in the central plateau region of Oahu. Lands adjacent to the station are largely devoted to the cultivation of pineapples. The nearest towns of Wahiawa and Whitmore village each lie approximately one mile southwest and west, respectively, from the station. Due to the heavy rainfall (50 to 60 inches per year) and topography of the station, contaminant migration via surface water is of primary concern. NCTAMS Wahiawa is drained by Poamoho Stream and its tributaries to the west, and North Fork Kaukonahua Stream to the extreme south. The North Fork Kaukonahua Stream empties into the Wahiawa Reservoir which is located less than three miles from the southern edge of the station. NRTF Lualualei occupies approximately 1,700 acres of the Lualualei Valley, which is a large coastal valley near the southwestern shoreline of Oahu. The nearest urban town is the town of Maili, which lies approximately one mile west from the station. The semi-arid conditions, flat to gently rolling topography, and permeable surface soils restrict the runoff from the base. Since there are no known downstream users of the groundwater or surface water, direct exposure to contaminated media is of primary concern.



Since NCTAMS EASTPAC is comprised of two installations, two Restoration Advisory Boards (RABs) have been established. The Wahiawa RAB was established in February 1995, and the Waianae/Lualualei RAB was established in March 1995. The Community Relations Plan (CRP) was finalized in August 1995. Information Repositories have been set up at the Wahiawa and Waianae Public Libraries.

Of the 24 CERCLA sites, five are Response Complete (RC), and the remaining are in the study phase. An Interim Remedial Action (IRA) has been conducted at eight transformer sites (Site 14) to remove PCB-contaminated soils that posed an imminent and substantial endangerment to public health. A public health assessment conducted on Site 14 following this removal action indicated that further removal actions were unnecessary. Of the four UST sites, one is RC, and the rest are in the study phase.

NCTAMS EASTPAC plans a removal action for soils contaminated with the chemical additive PCB at Sites 17, 18 and 20. This accelerated clean up will reduce potential exposure of workers and residents to PCB contaminated soils. Implementation of the Remedial Investigation/ Feasibility Study (RI/FS) planning documents at Sites 1 and 5 is scheduled. RI/FS planning documents will be prepared for the remaining Installation Restoration (IR) sites. Design of the remedial system at USTs 5 and 7 will be initiated and completed.

WAHIAWA NCTAMS EASTPAC
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - NCTAMS Wahiawa is located on the east side of the Schofield Plateau in north central Oahu. Most of the station is drained westward by the Poamoho Stream and its tributaries. The extreme southern edge of NCTAMS Wahiawa is drained by the North Fork Kaukonahua Stream less than three miles to the Wahiawa Reservoir. The soils of Wahiawa are derived from weathered Koolau volcanics, and are mostly silty clay or silty clay loam. The soil zone extends down about 20 feet from the surface, where it grades into deeply weathered volcanics of the Koolau range. The Koolau volcanics are mostly basaltic flows in this area. The Schofield groundwater body underlies the Schofield Plateau. The water table at NCTAMS Wahiawa is probably more than 700 feet below the surface. Because of water table depth, underlying clays, and steep ravines edging the property which intercept groundwater, contamination of the deep groundwater is unlikely. The 50 to 60 inches per year of rainfall tends to come in intense tropical cloudbursts, most of which would tend to run off rather than infiltrate the soils. For these reasons, contaminants would more likely migrate by surface water than groundwater pathways. Potable water at this station is supplied by the Army from deep wells at the east end of Schofield Barracks, just south of Wahiawa.

NRTF Lualualei is located on the central west side of Oahu, near the flat center of the Lualualei Valley. This station is drained by Mailiilii Stream on the north side of the base. The semi-arid conditions, flat to gently rolling topography, and permeable surface soils restrict the runoff from the base. The soils and rock underlying NRTF Lualualei consist of coral or calcareous deposits intermixed with alluvium from weathered volcanics of the Waianae Range. Alluvium and other debris in the area of NRTF Lualualei range in depth from less than 75 feet to 1,200 feet before Waianae volcanics are encountered. Groundwater in the area of NRTF Lualualei is shallow and brackish. There are no known downstream users of either groundwater or surface water. Upstream, in the southwest corner of the base, are a series of sewage treatment/oxidation ponds. Potable water is supplied by Naval Magazine (NAVMAG) Lualualei from deep wells in the Waianae Range, which would not be threatened by potential contamination from NRTF Lualualei.

NATURAL RESOURCES - Wildlife associated with NCTAMS Wahiawa and NRTF Lualualei include many exotic species that are commonly found in Hawaii. A 31-acre wildlife refuge has been established at NRTF Lualualei in cooperation with the U.S. Department of the Interior and the state of Hawaii. The area of the refuge which includes the Niulii Reservoir and NRTF oxidation ponds has been identified as habitat for three endangered bird species. An endangered fern is found near the Old NRTF Landfill, Site 13.

RISK - NCTAMS EASTPAC sites have been ranked for risk under the Department of Defense (DOD) Relative Risk System. Under this system, sites are qualitatively ranked High, Medium, or Low relative risk to prioritize sites for funding. Sixteen CERCLA sites have received a high ranking due to soil contamination and potential for direct exposure as well as via surface water and sediment runoff exposure. During Phase I Remedial Investigation/Feasibility Study (RI/FS) work, Human Health and Ecological Risk Assessments will be performed. The Navy has performed a Public Health Assessment on the eight transformer sites following the removal action, and deemed that institutional controls (e.g. fences) and further removal action activities were unnecessary.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - NCTAMS EASTPAC has been on the National Priorities List (NPL) since May 31, 1994 with a Hazard Ranking System (HRS) score of 50.00. NPL listing was determined by the identification of the chemical additive PCBs in soil surrounding electrical transformers in residential and general work areas at NCTAMS Wahiawa and NRTF Lualualei (Site 14). A removal action was conducted at eight of the transformer sites which presented an imminent and substantial endangerment to public health. In addition to PCB contamination in the soil, elevated levels of lead and mercury have been confirmed at the Old Wahiawa Landfill and Building 6 Disposal Area. Contamination at both sites has the potential to migrate to nearby gulches.

LEGAL AGREEMENTS - A Draft Federal Facility Agreement (FFA) between the EPA Region IX and the Navy was established on 26 October 1994. This document is in the process of being finalized.

PARTNERING - An informal partnering agreement exists between the Navy, EPA Region IX, and State of Hawaii Department of Health. This facilitates implementation of the Navy's Installation Restoration Program (IRP).

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - The Technical Review Committee (TRC) has been converted to a Restoration Advisory Board (RAB). Since NCTAMS EASTPAC is composed of two installations, two RABs exist: the Wahiawa RAB and the Waianae/Lualualei RAB. The Wahiawa RAB was established in February 1995, and the Waianae/Lualualei RAB was established in March 1995. Each RAB meets quarterly and is headed by Navy and community co-chairs. RAB meetings are open to the public and announced in newspapers as well as at neighborhood board meetings. Any citizen interested in becoming a community RAB member may apply for membership. Community RAB members vote on the new individual. Currently, each RAB has 24 to 25 permanent community members. The agenda items of the RAB meetings include the Navy's IRP, technical presentation of ongoing environmental work, funding and schedules, and the roles and responsibilities of RAB members.

COMMUNITY RELATION PLAN - The final Community Relation Plan (CRP) was completed in August 1995. Fact sheets are issued prior to RAB meetings. Site tours were conducted at NCTAMS Wahiawa and NRTF on 13 May and 3 June 1995 for RAB members and any other interested personnel.

INFORMATION REPOSITORY - Two Information Repositories were established in 1991. They are located at the Wahiawa Public Library in Wahiawa, HI, and the Waianae Public Library in Waianae, HI. The Administrative Record is maintained by the Navy at three locations: Pacific Division (PACDIV), Naval Facilities Engineering Command, Pearl Harbor, Hawaii, NCTAMS Wahiawa, and NRTF Lualualei.

WAHIAWA NCTAMS EASTPAC HISTORICAL PROGRESS

FY86

Sites 1-14 - An Initial Assessment Study (IAS) was completed. Four sites were recommended for Confirmation Study (CS): Sites 1, 5, 11 and 14. No Further Action (NFA) was recommended for Sites 2-4, 6-10, 12 and 13.

FY89

Sites 1, 5, 11 and 14 - A Site Inspection (SI) was completed. Analysis of soil samples indicated no volatile or semi-volatile organics, there were some petroleum hydrocarbons, and significant quantities of lead and mercury.

FY91

Sites 1, 5, 11 and 14 - An Extended Site Inspection (ESI) was completed. The study recommended implementing a downgradient monitoring program to detect any contaminant migration. Further investigation was recommended for Sites 1 and 5, and NFA for Site 11. The planning documents for Remedial Investigation/Feasibility Study (RI/FS) at Sites 1, 5, 11 and 14 were initiated.

An investigation was conducted for approximately 12 Underground Storage Tanks (USTs) to determine whether any releases had occurred in the past.

FY92

Sites 14-16 - A removal action was completed at Site 14, PCB transformer site. PCB-contaminated soils were removed from eight transformer sites. An SI was completed for Sites 15 and 16. An NFA was recommended for these sites. Approximately eight out-of-service USTs were removed. Four tank areas were identified as contaminated with petroleum hydrocarbons and recommended for site characterization during tank removal.

FY93

USTs 5-8 - An Initial Site Characterization (ISC) was completed for four UST sites (USTs 5-8). A Corrective Action Plan (CAP) was completed for UST 7.
Site 14 - Site 14 was regrouped so that the eight transformer sites which had undergone a Remedial Action (RA) were retained as Site 14, and the remaining transformer sites became Sites 17-19.

FY94

Site 20 - Four additional transformer sites were identified by activity personnel and added to the Navy's Installation Restoration Program (IRP) as Site 20.
Sites 1, 4-6, 10-13, 17, 18 and 20 - The planning documents for RI/FS were initiated.

PROGRESS DURING FISCAL YEAR 1995

FY95

USTs 5 and 6 - CAPs were completed. NFA is required at UST 6 as Response Complete (RC).
Sites 4-6, 10, 12, 13, 17, 18 and 20 - RI/FS planning documents were completed.

Sites 21-24 - New sites were identified for inclusion in the Navy's IRP.
UST 6 - This site was determined to be RC.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 1 and 5 - Remedial Investigation (RI) (implementation of RI/FS planning documents) will begin.
Sites 17, 18 and 20 - A removal action will be initiated to clean up PCB-contaminated soil
USTs 5 and 7 - Design (DES)will be initiated and completed.

FY97

Sites 17, 18 and 20 - An Engineering Evaluation/Cost Analysis (EE/CA), Action Memorandum, and removal action plans and specifications expect to be completed.
USTs 5 and 7 - Implementation of the CAP (IMP) will be initiated and completed.

WAHIAWA NCTAMS EASTPAC PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	17							
SI	9							
RI/FS					5		1	13
RD								3
RA	1							3
IRA					3(3)			
RC	5					3		16
Cumulative Response Complete	21%					33%		100%
UST	**FY94 and before**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01 and after**
ISC	4							
INV			1					
CAP	1	2						
DES			2					
IMP				2				
IRA								
RC		1		3				
Cumulative Response Complete		25%		100%				